

Figure 1

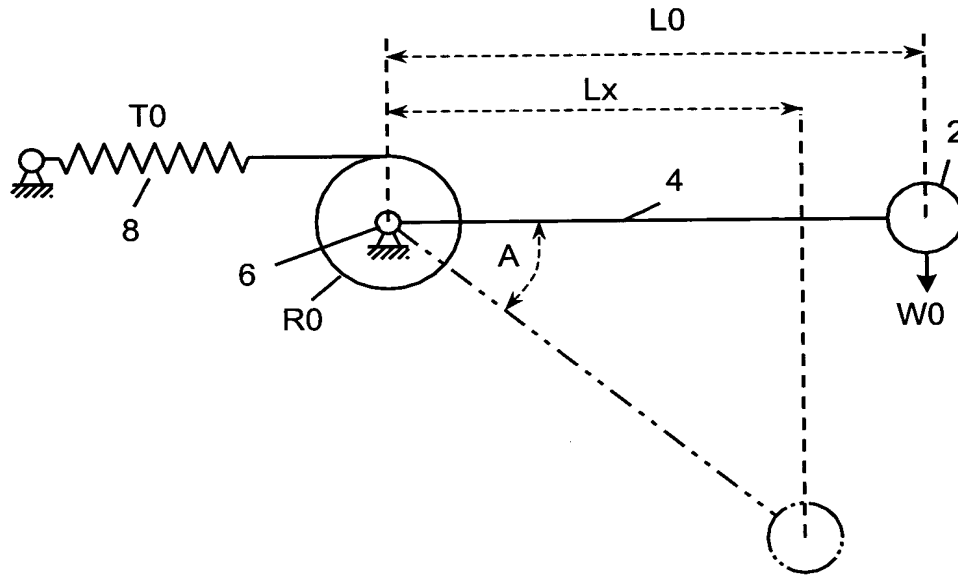


Figure 2

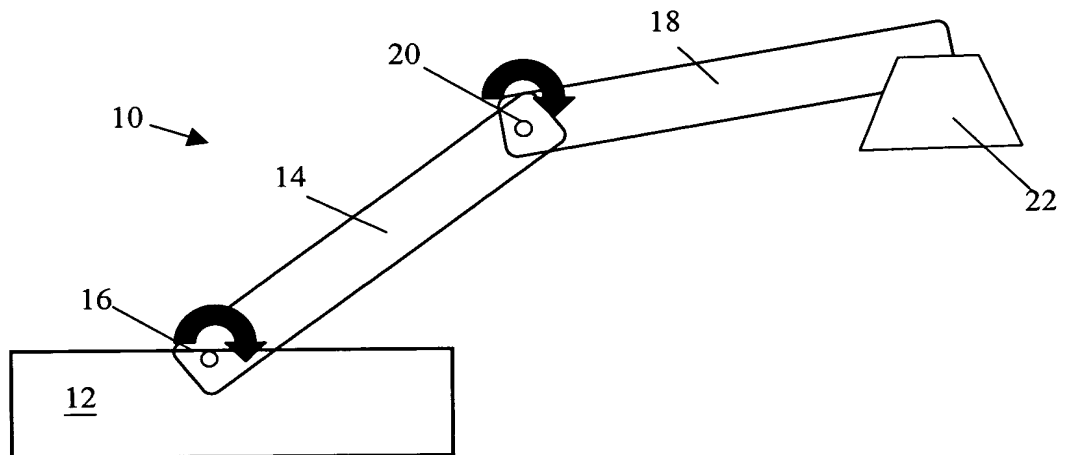


Figure 3

Figure 3 is a schematic diagram of a mechanical system 110. The system includes two gears, 120 and 122, which are in mesh with each other. Gear 120 has a radius $R1$ and is pivoted at 114. Gear 122 has a radius $R3$ and is pivoted at 128. A horizontal member 112 is pivoted at 120 and has a downward force $M2$ applied at 112. A motor $M1$ is connected to member 112 at 116. A spring $T1$ is connected to member 112 at 134 and to a fixed point at 132. A horizontal force $R2$ is applied to gear 122 at 130. Distances $L1$ and $L2$ are indicated from the pivots to the motor and spring attachment points, respectively. Angular displacements $A1$ and $A2$ are shown for gears 120 and 122.

Figure 4

Figure 4 is a schematic diagram of a mechanical system. It features three vertically stacked rotors, labeled R1, R2, and R3. Rotor R1 is at the bottom, R2 is in the middle, and R3 is at the top. Each rotor has a central pivot point, indicated by a small circle with a cross and a hatched area below it. Rotor R1 is connected to a horizontal arm (156) that extends to the right, ending in a circular mass (116). Rotor R2 is connected to a spring (134) on its left side. Rotor R3 is connected to a spring (132) on its left side. The system is shown in a state of motion, with dashed lines and arrows indicating angular displacements A1 and A2. Rotor R1 is shown with a dashed line and arrow A1, and Rotor R2 is shown with a dashed line and arrow A2. The rotors are labeled with various reference numerals: R1 (120, 124, 154, 152), R2 (122, 126, 132, 130), and R3 (128, 126, 132, 130). The horizontal arm is labeled 156, and the mass at the end is labeled 116. The spring on the left is labeled 134. The spring on the right is labeled 132. The reference numerals 110, 114, 120, 122, 124, 126, 128, 130, 132, 134, 150, 152, 154, 156, and 116 are used to identify specific components and points of interest.

Figure 5

